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ABSTRACT:

PURPOSE: To provide a method of forming an interlayer insulating layer which lessens the influence on the lower layers, makes it possible to deal with the miniaturization of semiconductor devices, and simplifies the processes.

CONSTITUTION: The title method of forming an interlayer insulating layer is to cause an interlayer insulating layer on a semiconductor substrate to contain lead, and to heat the part containing the lead by emitting ultraviolet rays on to the interlayer insulating layer after that and reflow the interlayer insulating layer. Besides, 1-10atomic% of lead is ion-implanted into the interlayer insulating layer.

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(25)発明の名称 層間絶縁層の形成方法

(26)要約

【目的】下層に影響が少なく、半導体装置の微細化に対応することができ、且つ工程が簡便化された層間絶縁層の形成方法を提供する。また、本発明の方法での使用に適した層間絶縁層を提供する。

【構成】本発明の層間絶縁層の形成方法は、半導体基板上に形成した層間絶縁層の表面に鉛を含ませた後、該層間絶縁層に紫外線を照射して層間絶縁層の面を含有した鉛を含むように、層間絶縁層をリフローさせることを特徴とする。また、本発明の層間絶縁層は、1乃至10 atomic%の鉛をイオン注入して成ることを特徴とする。

L Number	Hits	Search Text	DB	Time stamp
6	868	438/for.395.ccls.	EPO; JPO; DERWENT	2002/11/14 12:40
7	90	438/for.397.ccls.	EPO; JPO; DERWENT	2002/11/14 12:40
8	2496	BPSG or borophosphosilicate	EPO; JPO; DERWENT	2002/11/14 12:41
9	24	(UV or ultraviolet) with reflow	EPO; JPO; DERWENT	2002/11/14 12:41
10	22	438/for.395.ccls. and (BPSG or borophosphosilicate)	EPO; JPO; DERWENT	2002/11/14 12:41
11	0	438/for.397.ccls. and (BPSG or borophosphosilicate)	EPO; JPO; DERWENT	2002/11/14 12:41
12	2	(BPSG or borophosphosilicate) and ((UV or ultraviolet) with reflow)	EPO; JPO; DERWENT	2002/11/14 12:41
-	543	438/778.ccls.	USPAT; US-PGPUB	2002/11/06 12:55
-	9642	BPSG or borophosphosilicate	USPAT; US-PGPUB	2002/11/14 12:40
-	184254	UV or ultraviolet	USPAT; US-PGPUB	2002/11/06 13:43
-	9	438/778.ccls. and (BPSG or borophosphosilicate) and (UV or ultraviolet)	USPAT; US-PGPUB	2002/11/06 13:02
-	13690	reflow	USPAT; US-PGPUB	2002/11/06 13:43
-	53	(UV or ultraviolet) with reflow	USPAT; US-PGPUB	2002/11/14 12:41
-	2	(BPSG or borophosphosilicate) with ((UV or ultraviolet) with reflow)	USPAT; US-PGPUB	2002/11/06 13:04
-	2	(BPSG or borophosphosilicate) with reflow with (UV or ultraviolet)	USPAT; US-PGPUB	2002/11/06 13:04
-	914	(BPSG or borophosphosilicate) with reflow	USPAT; US-PGPUB	2002/11/06 13:18
-	2	((BPSG or borophosphosilicate) with reflow) same (UV or ultraviolet)	USPAT; US-PGPUB	2002/11/06 13:07
-	185	438/760.ccls.	USPAT; US-PGPUB	2002/11/06 13:07
-	3	(BPSG or borophosphosilicate) and (UV or ultraviolet) and 438/760.ccls.	USPAT; US-PGPUB	2002/11/06 13:11
-	2	reflow and ((BPSG or borophosphosilicate) and (UV or ultraviolet) and 438/760.ccls.)	USPAT; US-PGPUB	2002/11/06 13:11
-	18	(BPSG or borophosphosilicate) with (UV or ultraviolet)	USPAT; US-PGPUB	2002/11/06 13:17
-	95	438/765.ccls.	USPAT; US-PGPUB	2002/11/06 13:17
-	1	((BPSG or borophosphosilicate) with reflow) and 438/765.ccls.	USPAT; US-PGPUB	2002/11/06 13:18
-	82	(BPSG or borophosphosilicate) same (UV or ultraviolet)	USPAT; US-PGPUB	2002/11/06 13:18
-	0	438/765.ccls. and ((BPSG or borophosphosilicate) same (UV or ultraviolet))	USPAT; US-PGPUB	2002/11/06 13:18
-	0	(BPSG or borophosphosilicate) and (UV or ultraviolet) and 438/765.ccls.	USPAT; US-PGPUB	2002/11/06 13:18
-	93	((BPSG or borophosphosilicate) with reflow) and (UV or ultraviolet)	USPAT; US-PGPUB	2002/11/06 13:42
-	669900	BPSG or borophosphosilicate or dielectric or insulator or insulating	EPO; JPO; DERWENT	2002/11/06 13:53
-	129784	UV or ultraviolet	EPO; JPO; DERWENT	2002/11/06 13:43
-	5655	(BPSG or borophosphosilicate or dielectric or insulator or insulating) and (UV or ultraviolet)	EPO; JPO; DERWENT	2002/11/06 13:43
-	9782	reflow	EPO; JPO; DERWENT	2002/11/06 13:43
-	13	((BPSG or borophosphosilicate or dielectric or insulator or insulating) and (UV or ultraviolet)) and reflow	EPO; JPO; DERWENT	2002/11/06 13:43

-	391847	dielectric or insulator or insulating	USPAT; US-PGPUB	2002/11/06 13:54
-	2	(dielectric or insulator or insulating) with reflow with (UV or ultraviolet)	USPAT; US-PGPUB	2002/11/06 14:06
-	3148	(dielectric or insulator or insulating) with (UV or ultraviolet)	USPAT; US-PGPUB	2002/11/06 14:07
-	119	((dielectric or insulator or insulating) with (UV or ultraviolet)) and reflow	USPAT; US-PGPUB	2002/11/06 14:07
-	113	((((dielectric or insulator or insulating) with (UV or ultraviolet)) and reflow) not (((BPSG or borophosphosilicate) with reflow) and (UV or ultraviolet))	USPAT; US-PGPUB	2002/11/06 14:23